IN THE CLAIMS:

1. (previously amended) A trailer brake controller for use in a passenger vehicle for controlling a towed trailer comprising;

a control element positioned within the passenger vehicle;

a vehicle speed input providing vehicle speed to said control element;

a vehicle brake pressure input providing vehicle brake pressure to said control element; ~~and~~

a trailer brake output, said trailer brake output controlled by said control element in response to said vehicle speed input and said vehicle brake pressure input; and

a diagnostic input from the towed trailer in communication with said control element, said diagnostic input verifying proper operation of the towed trailer.

2. (original) A trailer brake controller as described in claim 1, wherein said vehicle speed input and said vehicle brake pressure input are provided by a vehicle anti-lock braking system.

3. (original) A trailer brake controller as described in claim 1, wherein said vehicle brake pressure input is provided by a master cylinder sensor.

4. (previously amended) A trailer brake controller as described in claim 1, wherein said diagnostic input further verifies functionality of the towed trailer.

5. (original) A trailer brake controller as described in claim 1, further comprising:

at least one trailer brake indicator lamp output.

6. (original) A trailer brake controller as described in claim 1, further comprising:

an anti-lock braking activation input in communication with said control element, said anti-lock braking activation input signaling said control element when a vehicle anti-lock braking system is activated.

7. (original) A trailer brake controller as described in claim 1, further comprising:

at least one communication element, said at least one communication element providing communication between said control element and a vehicle occupant.

8. (original) A trailer brake controller as described in claim 7, wherein said at least one communication element comprises a display.

9. (original) A trailer brake controller as described in claim 7, wherein said at least one communication element comprises a display, a user control and a user over-ride switch.

10. (original) A trailer brake controller as described in claim 8, wherein

said display includes a gain display and a signal strength display.

11. (original) A trailer brake controller for use in a passenger vehicle for controlling a towed trailer comprising;

a control element positioned within the passenger vehicle and in communication with a vehicle anti-lock braking system;

a vehicle speed input providing vehicle speed from said vehicle anti-lock braking system to said control element;

a vehicle brake pressure input providing vehicle brake pressure from said anti-lock braking system to said control element; and

a trailer brake output, said trailer brake output controlled by said control element in response to said vehicle speed input and said vehicle brake pressure input.

12. (previously amended) A trailer brake controller as described in claim 11, further comprising:

a diagnostic input in communication with said control element, said diagnostic input verifying proper operation of the towed trailer.

13. (original) A trailer brake controller as described in claim 11, further comprising:

at least one trailer brake indicator lamp output.

14. (original) A trailer brake controller as described in claim 11, further comprising:

an anti-lock braking activation input in communication with said control element, said anti-lock braking activation input signaling said control element when a vehicle anti-lock braking system is activated.

15. (original) A trailer brake controller as described in claim 11, further comprising:

at least one communication element, said at least one communication element providing communication between said control element and a vehicle occupant.

16. (original) A trailer brake controller as described in claim 15, wherein said at least one communication element comprises a display.

17. (original) A trailer brake controller as described in claim 15, wherein said at least one communication element comprises a display, a user control and a user over-ride switch.

18. (original) A trailer brake controller as described in claim 17 wherein said user control comprises a gain input control.

19. (original) A trailer brake controller as described in claim 16, wherein said display includes a gain display and a signal strength display.

20. (original) A method of controlling a trailer braking system comprising:

determining vehicle speed and vehicle braking pressure through communication with an anti-lock braking system on the vehicle;

relaying the vehicle speed and vehicle braking pressure to a control element positioned on the vehicle;

using said vehicle speed and vehicle braking pressure to determine a trailer brake output signal; and

sending said trailer brake output signal to the trailer braking system.

21. (original) A method as described in claim 20, further comprising:

sending a diagnostic signal from the trailer braking system to said control element;

informing a vehicle occupant of said diagnostic signal through the use of a communication element.

22. (original) A method as described in claim 21, wherein said communication element comprises a display mounted within the vehicle dash.

23. (previously added) A trailer brake controller as described in claim 1, wherein said control element includes logic adapted to:

gradually ramp-up said trailer brake output in response to a gradual ramp-up of said brake pressure input; and

apply a step-function to said trailer brake output in response to a sudden increase of said brake pressure input.

24. (previously added) A trailer brake controller as described in claim 1, wherein said control element includes logic adapted to:

increase a gain of said trailer brake output in response to an increase in said vehicle speed input.

25. (previously added) A method as described in claim 20, further comprising:

ramping-up said trailer brake output signal gradually in response to a gradual ramp-up in said vehicle braking pressure; and

applying a step-function to said trailer brake output signal in response to a sudden increase in said vehicle braking pressure.

26. (previously added) A method as described in claim 20, further comprising:

increase a gain of said trailer brake output signal in response to an increase in said vehicle speed.